**Fig. 1**

Name	DNAzyme Sequenz
hgd1	5'-TCGGTCAGAggctagctacaacgaTGCGTTGCT-3'
hgd2	5'-GGCGTACGAggctagctacaacgaCTGCTCGGT-3'
hgd3	5'-GGCGGCGTAGgctagctacaacgaGACCTGCTC-3'
hgd4	5'-CTCGGGTCAGgctagctacaacgaCTGGGTAGC-3'
hgd5	5'-TCCTCTGCAGgctagctacaacgaCGGGGTCCT-3'
hgd6	5'-ACTCTGCAAggctagctacaacgaTCTGCGAGC-3'
hgd7	5'-GGGCGACGAggctagctacaacgaTCTGCAATT-3'
hgd8	5'-AAGGGGCGAggctagctacaacgaGACTCTGCA-3'
hgd9	5'-AAAACGGGAggctagctacaacgaCAGGTTGTA-3'
hgd10	5'-AGAATAAAAggctagctacaacgaGGGACCAGG-3'
hgd11	5'-ATGGCAGAAggctagctacaacgaAAAACGGGA-3'
hgd12	5'-AACTGGGTAggctagctacaacgaGGCAGAATA-3'
hgd13	5'-ATCCAAAAAggctagctacaacgaTGGGTATGG-3'
hgd14	5'-AGGGGAAGAggctagctacaacgaAAAAATCCA-3'
hgd15	5'-TTTTAAAAAggctagctacaacgaTATCTTGGA-3'
hgd16	5'-GTGGGGGGAggctagctacaacgaGGGAAGGCT-3'
hgd17	5'-GTTGAATGAggctagctacaacgaTTGCTTTCG-3'
hgd18	5'-GTCGTTGAaggctagctacaacgaGATTTGCTT-3'
hgd19	5'-GGCCCCGAaggctagctacaacgaCCGCGCGCG-3'
hgd20	5'-TCACCTCCAaggctagctacaacgaGGCCTCGGC-3'
hgd21	5'-CCGCCGTCaggctagctacaacgaCTCCATGGC-3'
hgd22	5'-GGTGGCTCaggctagctacaacgaCCAGCGCGG-3'
hgd23	5'-CGTTGAGCaggctagctacaacgaGGCGGGGTG-3'
hgd24	5'-CCGCGTCCAaggctagctacaacgaGTAGGAGTG-3'
hgd25	5'-CAGCGGGTAggctagctacaacgaTGCGCCGCG-3'
hgd26	5'-GCACATCCAaggctagctacaacgaCTCCTCCGG-3'
hgd27	5'-AAAAGCACaggctagctacaacgaCCACCTCCT-3'
hgd28	5'-TAAAAAGCaggctagctacaacgaATCCACCTC-3'
hgd29	5'-GACCGTCGaggctagctacaacgaGTTAAAAAG-3'
hgd30	5'-TTGCCTTGaggctagctacaacgaCGTCGATGT-3'
hgd31	5'-AGGGCGGGAggctagctacaacgaGTGGTTGCC-3'
hgd32	5'-TGGCCCTGAggctagctacaacgaCGAGTTTCC-3'
hgd33	5'-ACCTCTGCAggctagctacaacgaCGTGGCCCT-3'
hgd34	5'-CGGAGGGTAggctagctacaacgaCTCTGCACC-3'
hgd35	5'-GGCGGCACAggctagctacaacgaCTGGCTCCC-3'
hgd36	5'-CGGGCGGCaggctagctacaacgaACCTGGCTC-3'
hgd37	5'-AGGGATCCAaggctagctacaacgaGAAGCAGAG-3'
hgd38	5'-GGGTAGGGAggctagctacaacgaCCATGAAGC-3'
hgd39	5'-GGGCTGAGAggctagctacaacgaTCCAGGGGG-3'
hgd40	5'-GTGGATGGAggctagctacaacgaGTCTTGAG-3'
hgd41	5'-CGTGGTGGAggctagctacaacgaGGACGTCTT-3'
hgd42	5'-GGGGGTAGAggctagctacaacgaGGAGAGGGG-3'
hgd43	5'-GGAGGAGGAggctagctacaacgaGAGGCCGGG-3'
hgd44	5'-GCCCCCGAggctagctacaacgaAAGGAGGAG-3'
hgd45	5'-CCGGGGAGAggctagctacaacgaGTCCCTTCGG-3'
hgd46	5'-GGACAGCGAggctagctacaacgaGGGTCCGGG-3'
hgd47	5'-TGGGGTGGAggctagctacaacgaAGCGATGGG-3'
hgd48	5'-CTTGAGGCAggctagctacaacgaTCTTTCTCG-3'
hgd49	5'-CACCTGGTAggctagctacaacgaTTGAGGCAC-3'

Fig. 3 Cont.

Name	DNAzyme Sequenz
hgd50	5'-GCAGGGGCaggctagctacaacgaCTGGTACTT-3'
hgd51	5'-CCAGCTTCaggctagctacaacgaGCTGTCGGG-3'
hgd52	5'-GTGGGACGaggctagctacaacgaTCCAGCTTC-3'
hgd53	5'-GGAGTGGGaggctagctacaacgaGACTCCAGC-3'
hgd54	5'-ATGCTGCCAggctagctacaacgaGGGAGTGGG-3'
hgd55	5'-GGGCGGTCaggctagctacaacgaGCTGCCACG-3'
hgd56	5'-GAGGCTCCAggctagctacaacgaCCAGGGCGG-3'
hgd57	5'-GTGGGTTCGaggctagctacaacgaGAGGAGGCT-3'
hgd58	5'-AGGTGGTGAggctagctacaacgaGGGGTGGTG-3'
hgd59	5'-ACTCGGGCaggctagctacaacgaGTAGGGCGG-3'
hgd60	5'-GGAGCTGTAggctagctacaacgaTCGGGCACG-3'
hgd61	5'-GGACTTGCaggctagctacaacgaCCGAAGCCG-3'
hgd62	5'-GGGCCTGGAggctagctacaacgaTTGCATCCG-3'
hgd63	5'-TGTGCTGGAggctagctacaacgaCGGGCCTTG-3'
hgd64	5'-GTTACACAggctagctacaacgaTCCCTGCCT-3'
hgd65	5'-CAGTTCACAggctagctacaacgaACTCCCTGC-3'
hgd66	5'-CACAGTTCaggctagctacaacgaACACTCCCT-3'
hgd67	5'-GTTGCCCCAggctagctacaacgaAGTTCACAC-3'
hgd68	5'-TCGCCGCCAggctagctacaacgaAGTGGGGTC-3'
hgd69	5'-CCCGTGCCAggctagctacaacgaCTCGCCGCC-3'
hgd70	5'-GGCGTTGCaggctagctacaacgaAGGTAGTGT-3'

Multiple Sequence Alignments GATA-3

Sequenz_1	1	GGCGCCGCTCTTGATAC TTT CAGAAAGATGCAT TCCCTGTAAAAA	60
Sequenz_2	****		****
Sequenz_3	1	GGCGCCGCTCTTGATAC TTT CAGAAAGATGCAT TCCCTGTAAAAA	60
Sequenz_1	61	AGAGAGAGAGAGAAGAAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	119
Sequenz_2	****		****
Sequenz_3	61	AGAGAGAGAGAGAAGAAGAGAGAGAGAGACGGAGGGAGAGCGAGACAGAGCG	120
Sequenz_1	120	AGCAACGCAATCTGAC CGAGCAGGTCGTACGCCGCCGCTCCTCCTCTCTGCTCTTC	179
Sequenz_2	****		****
Sequenz_3	121	AGCAACGCAATCTGAC CGAGCAGGTCGTACGCCGCCGCTCCTCCTCTCTGCTCTTC	180
Sequenz_1	180	GCTACCCAGGTGACCC GAGGAGGGACTCCGCTCCGAGCGGCTGAGGACCCCGGTGCAGA	239
Sequenz_2	****		****
Sequenz_3	181	GCTACCCAGGTGACCC GAGGAGGGACTCCGCTCCGAGCGGCTGAGGACCCCGGTGCAGA	240
Sequenz_1	240	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTCGCCCTTTTACAACTGGTCCCGTTT	299
Sequenz_2	****		****
Sequenz_3	241	GGAGCCTGGCTCGCAG AATTGCAGAGTCGTCGCCCTTTTACAACTGGTCCCGTTT	300
Sequenz_1	300	TTCTGCC TACCCAGT TTTTGGATTTTGTCTTCCCTTCTTCTTTGCTAAACGACCC	359
Sequenz_2	****		****
Sequenz_3	301	TTCTGCC TACCCAGT TTTTGGATTTTGTCTTCCCTTCTTCTTTGCTAAACGACCC	360
Sequenz_1	360	CTCCAAGATAATTTTT AAAAACCCTTCTCCTTTGCTCACCTTTGCTTCCAGCCTTCCCA	419
Sequenz_2	1		
Sequenz_3	361	CTCCAAGATAATTTTT AAAAACCCTTCTCCTTTGCTCACCTTTGCTTCCAGCCTTCCCA	420
Sequenz_1	420	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	479
Sequenz_2	15		
Sequenz_3	421	TCCCCCACCAGAAAGC AAATCATTTCAACGACCCCGACCTCCGACGGCAGGAGCCCCC	480
Sequenz_1	480	GACCTCCAGGCGGAC CGCCCTTCTCCTCGCGGGTTCCGGGCCGCGAGAGGGC	539
Sequenz_2	75		
Sequenz_3	481	GACCTCCAGGCGGAC CGCCCTTCTCCTCGCGGGTTCCGGGCCGCGAGAGGGC	540
Sequenz_1	540	GCGAAGACAGCCGAGG CCATGGAGGTGACGGCGGACCAGCCGCGCTGGGTGAGCCACCAC	599
Sequenz_2	134		
Sequenz_3	541	GCGAAGACAGCCGAGG CCATGGAGGTGACGGCGGACCAGCCGCGCTGGGTGAGCCACCAC	600
Sequenz_1	600	CACCCCGCGGTGCTCA ACGGGCAGCACCCGGACACGCACCACCCGGGCTCAGCCACTCC	659
Sequenz_2	194		
Sequenz_3	601	CACCCCGCGGTGCTCA ACGGGCAGCACCCGGACACGCACCACCCGGGCTCAGCCACTCC	660
Sequenz_1	660	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	719
Sequenz_2	254		
Sequenz_3	661	TACATGGACGCGGCGC AGTACCCGCTGCCGGAGGAGGTGGATGTGCTTTTAAACATCGAC	720
Sequenz_1	720	GGTCAAGGCAACCACG TCCCGCCCTACTACGAAACTCGGTGAGGGCCACGGTGCAGAGG	779
Sequenz_2	314		
Sequenz_3	721	GGTCAAGGCAACCACG TCCCGCCCTACTACGAAACTCGGTGAGGGCCACGGTGCAGAGG	780
Sequenz_1	780	TACCTCCGACCCACC ACGGGAGCCAGGTGTGCCGCCGCTCTGCTTCATGGATCCCTA	839
Sequenz_2	374		
Sequenz_3	781	TACCTCCGACCCACC ACGGGAGCCAGGTGTGCCGCCGCTCTGCTTCATGGATCCCTA	840
Sequenz_1	840	CCTGGCTGGACGGCG GCAAAGCCCTGGGAGCCACCACCGCCTCCCCCTGGAATCTC	899
Sequenz_2	434		
Sequenz_3	841	CCTGGCTGGACGGCG GCAAAGCCCTGGGAGCCACCACCGCCTCCCCCTGGAATCTC	900
Sequenz_1	900	AGCCCTTCTCCAAGA CGTCCATCCACCACGGCTCCCCGGGGCCCTCTCCGTCTACCC	959
Sequenz_2	494		
Sequenz_3	901	AGCCCTTCTCCAAGA CGTCCATCCACCACGGCTCCCCGGGGCCCTCTCCGTCTACCC	960
Sequenz_1	960	CGGCCCTCGTCTCTCT CTTGTGCGGGGGCCACGCCAGCCGACCTCTTACCTTCCCG	1019
Sequenz_2	554		
Sequenz_3	961	CGGCCCTCGTCTCTCT CTTGTGCGGGGGCCACGCCAGCCGACCTCTTACCTTCCCG	1020
Sequenz_1	1020	CCACCCCGCCGAAGG ACGTCTCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1079
Sequenz_2	614		
Sequenz_3	1021	CCACCCCGCCGAAGG ACGTCTCCCGGACCCATCGCTGTCCACCCAGGCTCGGCCGGC	1080

Fig. 4 Cont.

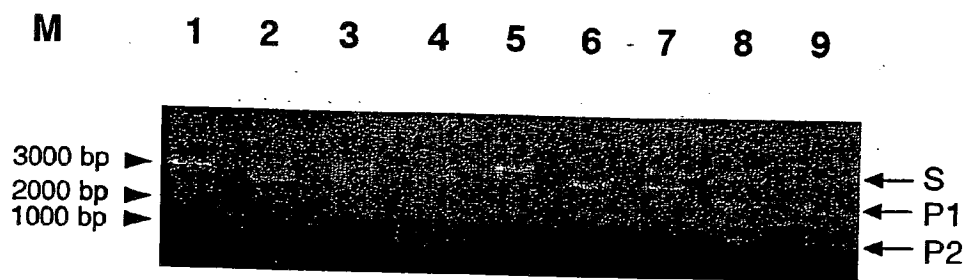
Sequenz_1	1080	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	1139
Sequenz_2	674	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	733
Sequenz_3	1081	TCGGCCCCGGCAGGACG AGAAAGAGTGCCTCAAGTACCAGGTGCCCTGCCCGACAGCATG	1140
Sequenz_1	1140	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	1199
Sequenz_2	734	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	793
Sequenz_3	1141	AAGCTGGAGTCGTCCC ACTCCCGTGGCAGCATGACCGCCCTGGGTGGAGCCTCCTCGTCG	1200
Sequenz_1	1200	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	1259
Sequenz_2	794	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	853
Sequenz_3	1201	ACCCACCACCCCATCA CCACCTACCCGCCCTACGTGCCCGAGTACAGCTCCGGACTCTTC	1260
Sequenz_1	1260	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	1319
Sequenz_2	854	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	913
Sequenz_3	1261	CCCCCAGCAGCCTGC TGGGCGGCTCCCCACCGGCTTCGGATGCAAGTCCAGGCCAAG	1320
Sequenz_1	1320	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	1379
Sequenz_2	914	GCCCGGTCCAGCACAG ---GCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	970
Sequenz_3	1321	GCCCGGTCCAGCACAG AAGGCAGGGAGTGTGTGAACCTGTGGGGCAACCTCGACCCCACTG	1380
Sequenz_1	1380	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	1439
Sequenz_2	971	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	1030
Sequenz_3	1381	TGGCGGCGAGATGGCA CGGGACACTACCTGTGCAACGCCTGCGGGCTCTATCACAAAATG	1440
Sequenz_1	1440	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1499
Sequenz_2	1031	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1090
Sequenz_3	1441	AACGGACAGAACCGGC CCCTCATTAAGCCCAAGCGAAGGCTGTCTGCAGCCAGGAGAGCA	1500
Sequenz_1	1500	GGGACGTCCTGTGCGA ACTGTGACACCACCAACCACTCTGGAGGAGGAATGCCAAT	1559
Sequenz_2	1091	GGGACGTCCTGTGCGA ACTGTGACACCACCAACCACTCTGGAGGAGGAATGCCAAT	1150
Sequenz_3	1501	GGGACGTCCTGTGCGA ACTGTGACACCACCAACCACTCTGGAGGAGGAATGCCAAT	1560
Sequenz_1	1560	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	1619
Sequenz_2	1151	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	1210
Sequenz_3	1561	GGGGACCCCTGTCTGCA ATGCCTGTGGGCTCTACTACAAGCTTCACAATATTAACAGACCC	1620
Sequenz_1	1620	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1679
Sequenz_2	1211	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1270
Sequenz_3	1621	CTGACTATGAAGAAGGAAGGCATCCAGACCAGAAACCGAAAAATGTCTAGCAAATCCAAA	1680
Sequenz_1	1680	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1739
Sequenz_2	1271	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1330
Sequenz_3	1681	AAGTGCAAAAAAGTGC ATGACTCACTGGAGGACTTCCCCAAGAACAGCTCGTTTAAACCCG	1740
Sequenz_1	1740	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1799
Sequenz_2	1331	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1390
Sequenz_3	1741	GCCGCCCTCTCCAGAC ACATGTCCTCCTGAGCCACATCTCGCCCTTCAGCCACCCAGC	1800
Sequenz_1	1800	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1859
Sequenz_2	1391	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1450
Sequenz_3	1801	CACATGCTGACCACGC CCACGCCGATGCACCCGCCATCCAGCCTGTCTTTGGACCACAC	1860
Sequenz_1	1860	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1919
Sequenz_2	1451	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1510
Sequenz_3	1861	CACCCCTCCAGCATGG TCAACGCCATGGGTTAGAGCCCTGCTCGATGCTCACAGGGCCCC	1920
Sequenz_1	1920	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1979
Sequenz_2	1511	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1570
Sequenz_3	1921	CAGCGAGAGTCCCTGC AGTCCCTTTGCACTTGCAATTTTTCAGGAGCAGTATCATGAAGC	1980
Sequenz_1	1980	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	2039
Sequenz_2	1571	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	1630
Sequenz_3	1981	CTAAACGCGATGGATA TATGTTTTTGAAGGCAGAAAGCAAAATTATGTTTGCCACTTTGC	2040
Sequenz_1	2040	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	2099
Sequenz_2	1631	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	1690
Sequenz_3	2041	AAAGGAGCTCACTGTG GTGTCTGTGTTCACCACTGAATCTGGACCCCATCTGTGAATA	2100

Fig. 4 Cont.

Sequenz_1	2100	AGCCATTCTGACTCATATCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAA-T	2158
Sequenz_2	1691	AGCCATTCTGACTCATATCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAAT	1750
Sequenz_3	2101	AGCCATTCTGACTCATATCCCCTATTTAACAGGGTCTCTAGTGCTGTGAAAAAAAAAAAT	2160
Sequenz_1	2159	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2218
Sequenz_2	1751	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	1810
Sequenz_3	2161	CTGAACATTGCATAT AACTTATATTGTAAGAAATACTGTACAATGACTTTATTGCATCT	2220
Sequenz_1	2219	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2278
Sequenz_2	1811	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	1870
Sequenz_3	2221	GGGTAGCTGTAAGGCA TGAAGGATGCCAAGAAGTTTAAGGAATATGGGAGAAATAGTGTG	2280
Sequenz_1	2279	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAACTGCCAGTTTGTTCCTT	2338
Sequenz_2	1871	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAACTGCCAGTTTGTTCCTT	1930
Sequenz_3	2281	GAAATTAAGAAGAAAC TAGGTCTGATATTCAAATGGACAACTGCCAGTTTGTTCCTT	2340
Sequenz_1	2339	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	2398
Sequenz_2	1931	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	1990
Sequenz_3	2341	TCACTGGCCACAGTTG TTTGATGCATTAAAAGAAAAAAGAAAAAGAGAAAAAG	2399
Sequenz_1	2399	A-----	2399
Sequenz_2	1991	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCCCTCTGCAA	2050
Sequenz_3	2400	AAAAAAAAAGAAAAAA GTTGTAGGCGAATCATTTGTTCAAAGCTGTTGGCC-TCTGCAA	2458
Sequenz_1	****	-----	****
Sequenz_2	2051	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAGTTGCCATTGAGGGTTTCAG	2110
Sequenz_3	2459	GGAAATACCAGTTCTG GGCAATCAGTGTTACCGTTCACCAGTTGCCATTGAGGGTTTCAG	2518
Sequenz_1	****	-----	****
Sequenz_2	2111	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTGTATG	2170
Sequenz_3	2519	AGAGCCTTTTCTAGG CCTACATGCTTTGTGAACAAGTCCCTGTAATTGTTGTTGTATG	2578
Sequenz_1	****	-----	****
Sequenz_2	2171	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTCATCATATTATACAGAC	2230
Sequenz_3	2579	TATAATTCAAAGCACC AAAATAAGAAAAGATGTAGATTATTTCATCATATTATACAGAC	2638
Sequenz_1	****	-----	****
Sequenz_2	2231	CGAACTGTTGTATAAA TTTATTTACTGCTAGTCTTAAGAACTGCTTTCTTCGTTTGT	2290
Sequenz_3	2639	CGAACTGTTGTATAAA TTTATTTACTGCTAGTCTTAAGAACTGCTTTCTTCGTTTGT	2698
Sequenz_1	****	-----	****
Sequenz_2	2291	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGGTTGAATAAACTAGATTACATTCAAGTTG	2350
Sequenz_3	2699	GTTTCAATATTTTCCT TCTCTCTCAATTTTCGG-----	2731
Sequenz_1	****	-----	****
Sequenz_2	2351	GCAAAAAAAAAAAAAA	2365
Sequenz_3	****	-----	****

GGCGCCGTCTTGATACTTTTCAGAAAGAATGCATTCCCTGTAAAAA
AAAAAATACTGAGAGAGGAGAGAGAGAGAAGAAGAGAGAGACGG
AGGGAGAGCGAGACAGAGCGAGCAACGCAATCTGACCGAGCAGGTCTGAC
GCCGCCGCTCCTCCTCCTCTCTGCTCTTCGCTACCCAGGTGACCCGAGG
AGGGACTCCGCTCCGAGCGGCTGAGGACCCCGGTGCAGAGGAGCCTGGC
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TTCTGCCATACCCAGTTTGGATTGTTTGTCTTCCCTTCTTCTCTTGC
TAAACGACCCCTCCAAGATAATTTTAAAAAACCTTCTCCTTGTCTACC
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CCCCGACCCCTCCGACGGCAGGAGCCCCCGACCTCCAGGCGGACCCGCC
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CACCCGCGCGTGTCAACGGGCGAGCACCCGGACACGCACCACCCGGGCCT
CAGCCACTCCTACATGGACGCGGCGCAGTACCCGCTGCCGAGGAGGTGG
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ACCCACCAACCCATCACCACCTACCCGCCCTACGTGCCCGAGTACAGCTC
CGGACTCTTCCCCCAGCAGCCTGCTGGGCGGCTCCCCACCGGCTTCG
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ACACTACCTGTGCAACGCTGCGGGCTCTTACAAAAAAGAACGGACAGA
ACCGGCCCTCTTAAGCCCAAGCGAAGGCTCTGCGAGCCAGGAGAGCA
GGGACCTCTGCGGAACCTCAGACCACCACAACCACACTCTGGAGGAG
GAAGCCAAATGGGGACCTCTGTCAGCCTGGGCTCTACTACAAGC
TTCACAATAACAGACCCCTGACTGAAGAAGGAAGGCACAGACC
AGAAACCGAAAACTAGCAACCAAAAAAGCAAAAAAGCAAGCA
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CCAGACACCTCTCCCTGAGCCACCTCGCCCTCAGCCACCCACAGC
CACGCTGACCACGCCCCACGCCGCGCACCCGCCACAGCCTCCTT
TGGACCACACCACCCCTCCAGCTGCGCACCCGCCGCTAGAGCCCTG
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TGCAATTTTGCAGGAGCACTCAAGGCCTAAACGCGAGGAGAAATTC
TTTTGAAGGCAGAAAGCAAAATGCTTGCCACTTTGCAAGGAGCTC
ACTGCTGCTCTTCCAACCACTGACTGGACCCCTCTGAGAA
AGCCCTCTGACTCAATCCCTATTTAACAGGCTCTAGTGTCTGAA
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ACAAAGACTTTTGTCTGCTGCTAGCTCAAGGCAAGGAAGCCAAG
AACTTAAGGAATGGGAGAAAGCTGGAAATGAAGAAGAACTAGC
CTCAATTCAAATGGACAACTGCCAGTTTCTTCTTTCACTGGCCA
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TCTGCAAGGAAATACCACTCTGGGCAACAGCTTACCTCACCAC
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AGAAAGATGAGATTTCTCTCAATTTACAGACCGAACTCTCTTA
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Fig. 4 A

**Fig. 5**

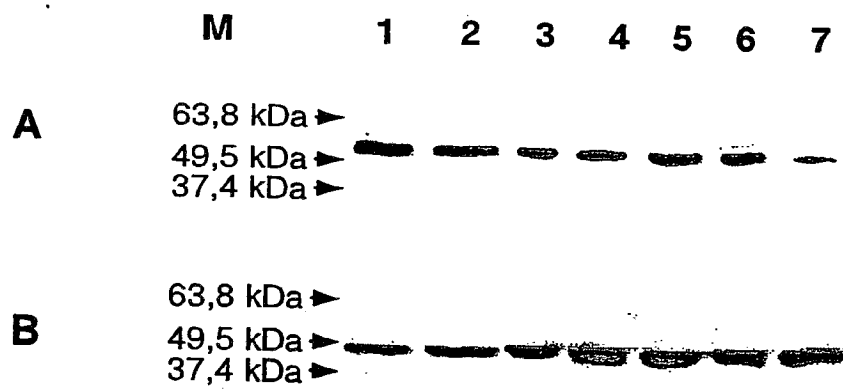
**Fig. 6**

Fig. 7

Name	DNAzyme Sequenz
td1	TGGCTTCTAggctagctacaacgaGCCCTCGTC
td2	GGGCTCTGAggctagctacaacgaGCCTGGCTT
td3	GGGACCCCAggctagctacaacgaCGGAGCCCG
td4	GGTGGGGGAggctagctacaacgaCCCACCGGA
td5	GGCGGGGGAggctagctacaacgaCCGAGGGCC
td6	GGGCTGGGAggctagctacaacgaGGGCAGGGA
td7	CGTCGAGGAggctagctacaacgaCCGCCCCCTC
td8	GGGCTGGCAGgctagctacaacgaCTTCCCGTA
td9	CGATGCCCCAggctagctacaacgaCCGGGGCGG
td10	GCTCCACGAggctagctacaacgaGCCCATCCG
td11	CCGGCTCCAggctagctacaacgaGATGCCCAT
td12	TCTCCGCAAggctagctacaacgaCCGGCTCCA
td13	CCGTCAGCAggctagctacaacgaGTCTCCGCA
td14	TCCCCGGCAGgctagctacaacgaCGGCTCGGT
td15	CCCCCGCGAggctagctacaacgaGCTCGTCCG
td16	GTAGGGAGAggctagctacaacgaCCCAGGCTG
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td18	CGGGAAGGAggctagctacaacgaTCGCCCCGG
td19	TAGTCCTCAggctagctacaacgaGCGGCCCCG
td20	TCCCCGACAggctagctacaacgaCTCCAGTCC
td21	TTTCCCCGAggctagctacaacgaACCTCCAGT
td22	TGAGCGCGAggctagctacaacgaCCTCAGTTT
td23	GGACCACAAGgctagctacaacgaAGGTGGTTG
td24	CTTGGAACAggctagctacaacgaAACAGGTGG
td25	AAACTTGGAggctagctacaacgaCACAACAGG
td26	CTGATTAAAggctagctacaacgaTTGGACCAC
td27	TGGTGCTGAggctagctacaacgaTAACTTGG
td28	TGATGATCAggctagctacaacgaCTCTGTCTG
td29	TGGTGATGAggctagctacaacgaCATCTCTGT
td30	GCTTGGTGAggctagctacaacgaGATCATCTC
td31	ATGGGAACAaggctagctacaacgaCCGCCGTCC
td32	GAATGGGAAggctagctacaacgaATCCGCCGT
td33	TGACAGGAAggctagctacaacgaGGGAACATC
td34	AGTAAATGAggctagctacaacgaAGGAATGGG
td35	CACAGTAAAggctagctacaacgaGACAGGAAT
td36	GCCCCGCCAggctagctacaacgaAGTAAATGA
td37	CCACAAACAggctagctacaacgaCCTGTAGTG
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td39	CCACGTCCAggctagctacaacgaAAACATCCT
td40	CCAAGACCAggctagctacaacgaGTCCACAAA
td41	CCACCAAGAggctagctacaacgaCACGTCCAC
td42	GCTGGTCCAggctagctacaacgaCAAGACCAC
td43	GCTCTGGTAggctagctacaacgaCGCCAGTGG
td44	CTGCACCCAggctagctacaacgaTTGCCGCTC
td45	CACACTGCAGgctagctacaacgaCCACTTGCC
td46	CTTTCCACAggctagctacaacgaTGCACCCAC
td47	GCCTTTCCAaggctagctacaacgaACTGCACCC
td48	TTCTTGGCAGgctagctacaacgaGCTGCCCTC

Fig. 7 Cont.

Name	DNAzyme Sequenz
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TD50	CCGGGTGGAggctagctacaacgaGTACAGGCG
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TD52	CAAATGAAaggctagctacaacgaTTCCTGGCG
TD53	TTTCCCAAaggctagctacaacgaGAAACTTCC
TD54	ATTGTTGGAggctagctacaacgaGCCCCCTTG
TD55	TGGGTCACAggctagctacaacgaTGTTGGACG
TD56	TCTGGGTCaggctagctacaacgaATTGTTGGA
TD57	GCACAATCaggctagctacaacgaCTGGGTCAC
TD58	GGAGCACAaggctagctacaacgaCATCTGGGT
TD59	ACTGGAGCaggctagctacaacgaAATCATCTG
TD60	ATGGAGGGaggctagctacaacgaTGGAGCACA
TD61	TGGTACTTAggctagctacaacgaGGAGGGACT
TD62	GGGCTGGTAggctagctacaacgaTTATGGAGG
TD63	TCAACGATAggctagctacaacgaGCAGCCGGG
TD64	CCTCAACGAggctagctacaacgaATGCAGCCG
TD65	TCACCTCAaggctagctacaacgaGATATGCAG
TD66	CGTCGTTCAggctagctacaacgaCTCAACGAT
TD67	GTAAAGATAggctagctacaacgaGCGTGTTGG
TD68	AAGTAAAGAggctagctacaacgaATGCGTGTT
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TD70	TCACGGCAaggctagctacaacgaGAACTGGGT
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TD74	TATTATCAaggctagctacaacgaTTTCAGCTG
TD75	GGGTTATTAggctagctacaacgaCAATTTTCA
TD76	AAGGGGTTAggctagctacaacgaTATCAATTT
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Multiple Sequenz Alignments T-bet

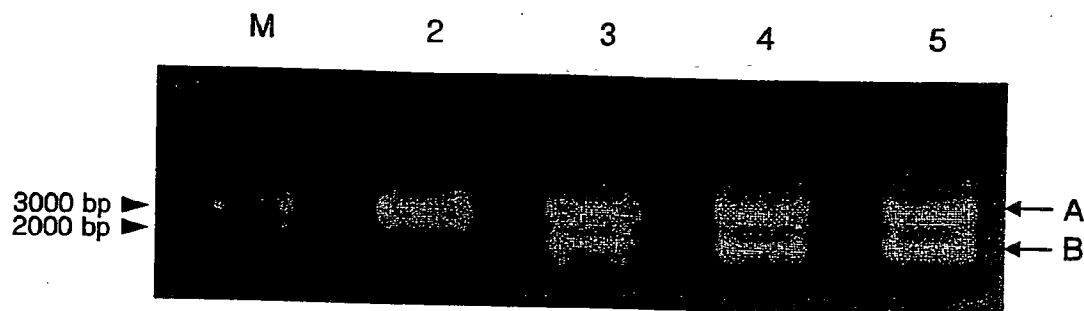
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Seq_1	61	CCAGGCGTCAGAGCCCGGGCTCCGGTGGGGTCCCCACCCGGCCCTCGGGTCCCCCGCCC	120
Seq_2	61	CCAGGCGTCAGAGCCCGGGCTCCGGTGGGGTCCCCACCCGGCCCTCGGGTCCCCCGCCC	120
Seq_1	121	CCTGCTCCCTGCCATCCAGCCACGCGACCTCTCGCGCGCGGAGGGGCGGGTCTCTCG	180
Seq_2	121	CCTGCTCCCTGCCATCCAGCCACGCGACCTCTCGCGCGCGGAGGGGCGGGTCTCTCG	180
Seq_1	181	ACGGCTACGGGAAGGTGCCAGCCCGCCCGGATGGGCATCGTGGAGCCGGGTTCGCGAGA	240
Seq_2	181	ACGGCTACGGGAAGGTGCCAGCCCGCCCGGATGGGCATCGTGGAGCCGGGTTCGCGAGA	240
Seq_1	241	CATGCTGACGGGCACCGAGCCGATGCCGGGGAGCGACGAGGGCCGGCGCCTGGCGCCGA	300
Seq_2	241	CATGCTGACGGGCACCGAGCCGATGCCGGGGAGCGACGAGGGCCGGCGCCTGGCGCCGA	300
Seq_1	301	CCCGCAGCAACGCTACTTCTACCCGGAGCCGGGCGCGCAGGACGCGGACGAGCGTTCGCGG	360
Seq_2	301	CCCGCAGCAACGCTACTTCTACCCGGAGCCGGGCGCGCAGGACGCGGACGAGCGTTCGCGG	360
Seq_1	361	GGGCGGCAGCCTGGGGTCTCCCTACCCGGGGGCGCCTTGGTGCCCGCCCCGCGAGCCG	420
Seq_2	361	GGGCGGCAGCCTGGGGTCTCCCTACCCGGGGGCGCCTTGGTGCCCGCCCCGCGAGCCG	420
Seq_1	421	CTTCCTTGGAGCCTACGCCCTACCCGCGCGACCCAGGCGCGCGCTTCCCCGGCGCGGG	480
Seq_2	421	CTTCCTTGGAGCCTACGCCCTACCCGCGCGACCCAGGCGCGCGCTTCCCCGGCGCGGG	480
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Seq_2	481	CGAGTCCTTCCCGCGCCCGCGGACCGCGAGGGCTACCAGCCGGGCGAGGGCTACGCCGC	540
Seq_1	541	CCCGGACCCGCGCGCCGGGCTCTACCCGGGGCCGCGTGAGGACTACGCGCTACCCGCGGG	600
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Seq_2	661	TAATCAGCACCAGACAGAGATGATCATCACAAGCAGGGACGGCGGATGTTCCCATTCCT	720
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Seq_2	721	GTCATTTACTGTGGCCGGGCTGGAGCCCAACAGCCACTACAGGATGTTTGTGGACGTGGT	780
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Seq_2	781	CTTGGTGGACCAAGCACCCTGGCGGTACCAGAGCGGCAAGTGGGTGCAGTGTGGAAAGGC	840
Seq_1	841	CGAGGGCAGCATGCCAGGAAACCGCCTGTACGTCCACCCGGAATCCCCAACACAGGAGC	900
Seq_2	841	CGAGGGCAGCATGCCAGGAAACCGCCTGTACGTCCACCCGGAATCCCCAACACAGGAGC	900
Seq_1	901	GCACTGGATGCGCCAGGAAGTTTCATTGGGAACTAAAGCTCAAAACAA	960
Seq_2	901	GCACTGGATGCGCCAGGAAGTTTCATTGGGAACTAAAGCTCAAAACAA	960
Seq_1	961	GTGACCCAGATGATTGTGCTCCAGTCCCTCCATAAGTACCAGCCCGGCT	1020
Seq_2	961	GTGACCCAGATGATTGTGCTCCAGTCCCTCCATAAGTACCAGCCCGGCT	1020
Seq_1	1021	GCATATCGTTGAGGTGAACGACGAGAGCCAGAGGCAGCCTGCAACGCTTCCAACACGCA	1080
Seq_2	1021	GCATATCGTTGAGGTGAACGACGAGAGCCAGAGGCAGCCTGCAACGCTTCCAACACGCA	1080
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Seq_1	1261	TGGGGGAGATCACTACTCTCTCTCTACCCAACAGTATCCTGTTCCAGCCGCTTCTA	1320
Seq_2	1261	TGGGGGAGATCACTACTCTCTCTCTACCCAACAGTATCCTGTTCCAGCCGCTTCTA	1320
Seq_1	1321	CCCCGACCTTCTGGCCAGGCGAAGGATGTGGTTCGCCAGGCTTACTGGCTGGGGGCCCC	1380
Seq_2	1321	CCCCGACCTTCTGGCCAGGCGAAGGATGTGGTTCGCCAGGCTTACTGGCTGGGGGCCCC	1380
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Fig. 8 Cont.

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Seq_2	1501	TGGCTGGCCTGTGGCACCCAGTACCC	TCCCAAGATGGGCCCCGGCCAGCTGGTT	CGCCC	1560
Seq_1	1561	TATGCGGACTCTGCCCATGGAACCCGGCCCTGGAGGCTCAGAGGGACGGGGACCAGAGGA			1620
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Seq_1	1621	CCAGGGTCCCCC	TTGGTGTGGACTGAGATTGG	CCCCATCCGGCCGGAATCCAGTGATT	1680
Seq_2	1621	CCAGGGTCCCCC	TTGGTGTGGACTGAGATTGG	CCCCATCCGGCCGGAATCCAGTGATT	1680
Seq_1	1681	AGGACTGGGCGAAGGAGACTCTAAGAGGAGGCGCGTGTCCCCCTATCCTTCCAGTGGTGA			1740
Seq_2	1681	AGGACTGGGCGAAGGAGACTCTAAGAGGAGGCGCGTGTCCCCCTATCCTTCCAGTGGTGA			1740
Seq_1	1741	CAGCTCCTCCCCTGCTGGGGCCCCCTTCTCCTTTTGATAAGGAAGCTGAAGGACAGTTTTTA			1800
Seq_2	1741	CAGCTCCTCCCCTGCTGGGGCCCCCTTCTCCTTTTGATAAGGAAGCTGAAGGACAGTTTTTA			1800
Seq_1	1801	TAACTATTTTCCCAACTGAGCAGATGACATGATGAAAGGAACAGAAACAGTGTTATTAGG			1860
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Seq_1	2161	CAGGTGTGGGACATGGGAGCAGGAGACTCCACTTCTTCCTTTGTACAGTAACCTTCAAC			2220
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Seq_1	2281	ACCATCAGCCCGCCAGGGTCAGGGAAGGACTCACCTGACTTTGGACAGCTGGCCTGGGC			2340
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Fig. 8A

**Fig. 9**

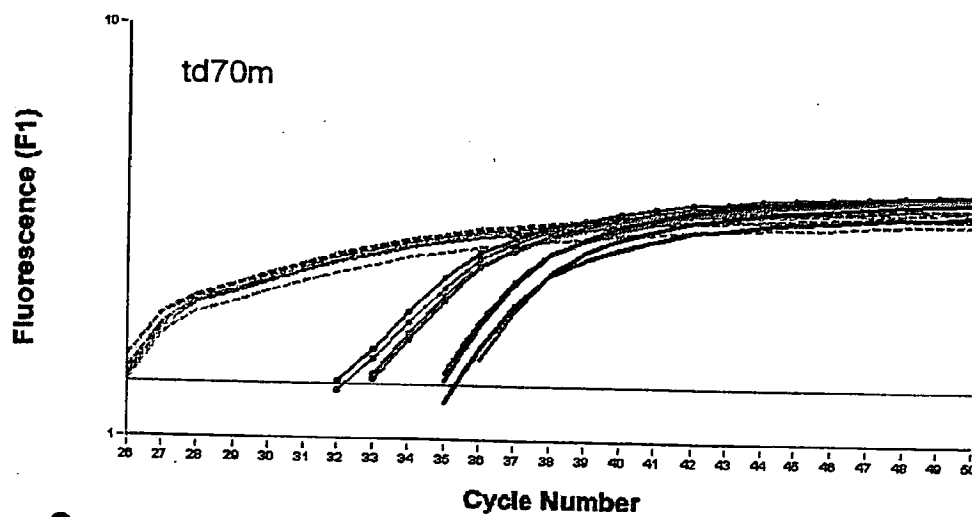
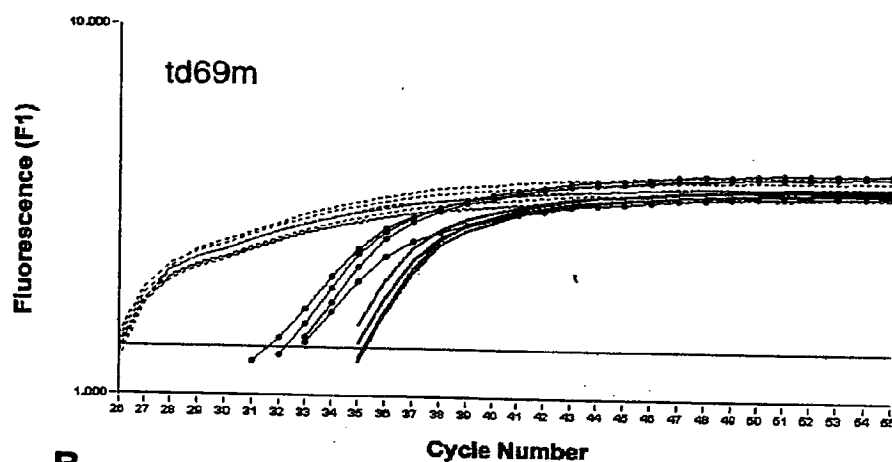
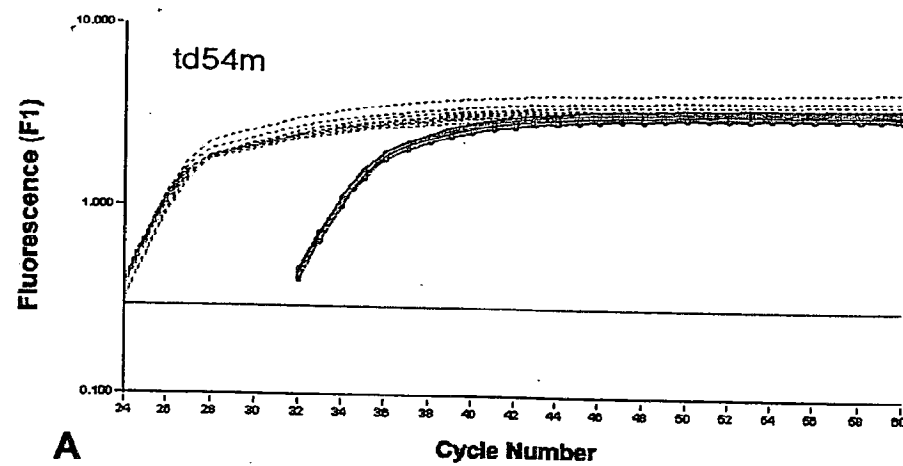
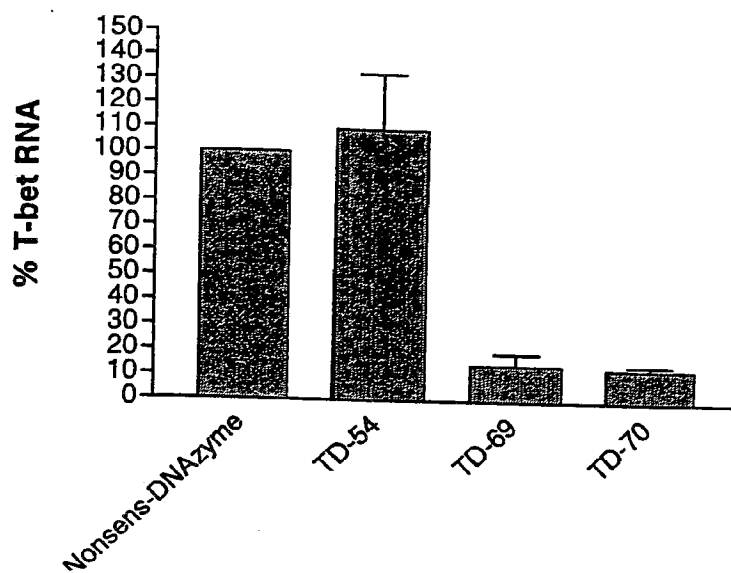


Fig. 10

**Fig. 11**